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ABSTRACT

Although most attempts to effect school reform have been initiated from the top down, an alternative paradigm of educational reform has emerged: the idea that educators in schools must become empowered agents in their own school improvement processes. This paper explores this new paradigm, arguing that schools are both the objects and arenas of educational improvement. The argument is divided into three "strands": the epistemological strand, which examines past and present epistemological claims for how knowledge is both generated and acted upon; the organizational strand, suggesting that to understand the dynamics of school-based change, one must understand the structure and function of schools as organizations; and the experiential strand, which reviews the history of attempts to make fundamental changes in schools. These discussions lead to the conclusion that schools, to become centers of change, must become centers of critical and self-reflective inquiry into educational processes. Extensive notes are included. (TE)

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THE SCHOOL AS THE CENTER OF CHANGE

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DRAFT

July, 1987

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THE SCHOOL AS THE CENTER OF CHANGE

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There are over 2.6 million of them in our nation's public elementary and secondary schools. Together, they comprise over 67% of the 3.9 million staff of all types employed by the local education agencies across the nation. They comprise 98% of the the total educational staff that serve and support districts and schools.[1]

Who are they? They are the educators -- teachers, principals and other administrators, special educators, counselors, librarians, and aides -- that staff our public school system at the building level. They are the people who spend their work days behind the walls of schools and doors of classrooms educating our children. Classroom teachers alone -- nearly 2.2 million of them -- account for over 26 billion teacher-students contact hours each academic year in public elementary and secondary schools across the nation.[2] And we know that what goes on in these classrooms is much the same as what went on when you and I were there, and those before us, regardless of national commission reports, state reform movements, or even directives from local educational agencies.[3]

That the centers for educational change and school improvement are anywhere else than in our nation's schools would be a difficult proposition to defend in light of these statistics. In my experience, I have encountered very few educators who were willing to argue that change was centered in committee rooms in the District of Columbia, in state departments of education, in school districts, or in schools, colleges or departments of education in universities and colleges. Yet the history of attempts to effect school reform suggests otherwise; these attempts have, by and large, been exercises in top-down, intervention strategies fashioned in the tradition of Frederick Winslow Taylor's

principles of scientific management.[4] The "time and motion" studies of the turn of the century have become the research, development, diffusion, adoption, implementation, and evaluation studies of modern times.

It has only been recently -- the last several years, really -- that an alternative paradigm for improving schools has been taken seriously in the reform proposals and actions by educational agencies. After a long history of advocacy in the literature on educational change,[5] the idea that educators in schools must become empowered agents in their own school improvement processes is finally coming into favor. The trend toward building-based decision-making in many districts and schools, although a bit short of the liberating experience some have advocated, is certainly a step in this direction.

The purpose of this paper is to celebrate the coming out of a good idea -- that the power to effect significant educational change is, indeed, in the hands of educators in schools. Yet, although I will construct an argument for schools as the centers of educational change, they certainly are not alone in their efforts. I have deliberately avoided terminology like "the school as the unit of change" or "the school as the basis of change" in order to avoid the impression that all our eggs for educational change and school improvement are in the baskets of school buildings. To say that something is at the center implies a good deal around it. Ignoring the impact (for better or worse) of district, county and state educational agencies, educational consultants and change facilitators, colleges of education, parent and other community groups, and so forth, would be professing ignorance of the ecological dynamics surrounding the public schooling of children and youth and the problems of accountability and responsibility that go with it.[6] However, if schools and what goes on inside them are not at the center of the educational ecology, then our efforts toward change and improvement are horribly misguided. My choice of terminology -- the school as

the center of change -- therefore, should be obvious and the implications, clear.

But the force of the obvious argument is not always compelling. Just because our educational work force is concentrated overwhelmingly in schools and the day-to-day action in terms of educational delivery takes place in these buildings does not convince everyone that schools should be the center of change. Part of the problem arises because of two meanings of the word "center," both of which I intend in my choice of the term. Nearly all educators would probably agree that the school should be the focal point or target of educational change and improvement efforts. Not all educators seem to agree, however, that the school should be the place for inquiry and reflective practice -- the place for critical thinking, dialogue, decision-making, action-taking, and evaluation in educational change and improvement efforts.

I will argue in this paper that schools are both the objects and arenas of educational improvement and change, notwithstanding the crucial importance of the educational resources and constituencies surrounding schools. The most compelling strand of my argument, I believe, is epistemological in nature, having to do with the claims of legitimacy made for how knowledge is both generated and acted upon. However, two other strands -- what I will label the organizational and the experiential -- deserve emphasis as well and represent the more typical arguments put forth by others for centering on schools. Put simply, to understand the dynamics of school-based change, one must understand the structure and function of schools as organizations; moreover, to estimate the potential and likelihood of school-based change, one must review the "successes," "failures" and lessons learned from the change efforts of the past.

Whatever their relative appeal in constructing the argument, all three strands -- the epistemological, organizational and experiential -- complement

one another and together support the thesis that the school is the center of change. Furthermore, and perhaps most importantly, these several strands of the argument coalesce around the same conditions for professional activity in schools -- the kinds of attitudes people need to share, the kinds of behaviors they need to engage in, and the kinds of working conditions that need to be nurtured and sustained. After exploring the thesis of schools as centers of change through considerations of epistemology, organizational theory, and empirical experience, I will end with some implications of the thesis for school practice.

The Epistemological Strand

Those who seek to make changes (and, hopefully, improvements) in schools usually claim either implicitly or explicitly some sort of knowledge base to support their efforts. These claims can range the gamut from divine inspiration and mystical intervention to empirically-based explanations, understandings or critiques. My interest is in the latter types of claims; and my use of the term "empirical" is intended to be very general in nature, covering the sorts of explanations derived from experimental, quasi-experimental and correlational studies in the tradition of the scientific or hypothetico-deductive methods; the sorts of interpretations derived from the more exploratory and naturalistic methods of case-study and participant observation; and the sorts of action-oriented analyses derived from dialectical critiques of the ideological content in extant knowledge and practices. Rather than repeat discussions of these several epistemological traditions qua traditions, I wish to discuss them in the context of how we have thought conventionally, and how we might think alternatively, about making changes and improvements in schools.

A predominant (perhaps the predominant) world view of knowledge and the utilization of knowledge in educational change stems directly from the positivist and post-positivist tradition in scientific research. Actually, there are several "world views" embedded in this tradition, but their differences are less important then their similarities for our purposes here.[8] Essentially, knowers see themselves as separated from what is to be known. Many educational researchers, for example, see themselves as separated from the objects of their study; they attempt to accumulate empirical evidence in support of law-like relationships between constructs that predict human behavior much like a classical physicist might accumulate evidence to support the equation $d=(1/2)gt^2$ and, thus, a theory explaining the behavior of falling objects.

The educational researcher, too, is interested in explaining behavioral phenomena, like the rise and fall of achievement test scores, for example. But instead of relatively easy and straightforward constructs to measure like distance and time, the educational researcher has constructs like self-concept, achievement, intelligence, academically engaged learning time, principal leadership, school effectiveness, and so forth. Instead of nearly error free and highly valid measurements and nearly perfect and replicable equations, the educational researcher has error-prone measurements of questionable validity and statistical guesses of approximate relationships that are typically weak and difficult to replicate from one time to the next. It was this realization that finally lead Lee Cronbach to abandon his search for a definitive science of psychology.[9]

This is not to suggest that appropriately contextualized interpretations of empirical research programs have no heuristic value for informing both theory and practice. When constructs are not reified or overly interpreted, when

results are considered tentative, when the socio-political context of the times are taken into account, when values and practical interests are recognized as intrinsic parts of the action in human affairs; then bodies of educational research -- like the studies on teacher behavior, methods of teaching and learning in specific subject areas, classroom organization and management, teacher education, cognitive development, and school effectiveness -- can be brought to bear usefully on programs of school improvement and change. As Cronbach concluded over a decade ago,

> Social scientists are rightly proud of the discipline we draw from the natural-science side of our ancestry. Scientific discipline is what we uniquely add to the time-honored ways of studying man. Too narrow an identification with science, however, has fixed our eyes upon an inappropriate goal. The goal of our work ... is not to amass generalizations atop which a theoretical tower can someday be erected ... The special task of the social scientist in each generation is to pin down the contemporary facts. Beyond that, he shares with the humanistic scholar and the artist in the effort to gain insight into contemporary relationships, and to realign the culture's view of man with present realities. To know man as he is is no mean aspiration.[10]

These conclusions are remarkably parallel in content and sentiment to the philosophically-based analysis of the behavioral sciences by Abraham Kaplan a decade earlier, when the R&D bandwagon was just beginning to gather momentum:

> Many behavioral scientists, I am afraid, look to methodology as a source of salvation ... There are indeed techniques to be mastered, and their resources and limitations are to be thoroughly explored. But

> these techniques are specific to their subject-matters, or to distinctive problems, and the norms governing their use derive from the contexts of their application, not from general principles of methodology. ... The work of the behavioral scientist might well become methodologically sounder if only he did not try so hard to be so scientific![11]

Unfortunately, this more pragmatic and contextualized interpretation of inquiry in the positivist and post-positivist tradition has not really become part of the practical wisdom of the research, development, dissemination, and evaluation community. Notwithstanding the paradigm shifting within this tradition, Soltis laments that "there [still] seems to be a basic common agreement ... that educational research must be empirical, objective, and value free --'scientific' in the positivist's sense."[12] This parochial interpretation of traditional scientific method has spawned a number false dichotomies or dogmas of inquiry -- objectivity vs. subjectivity, fact vs. value, quantity vs. quality, basic research vs. applied research, and so forth -- that have been the subject of on-again-off-again debate in the educational research community.

Perhaps the most insidious of these dogmas is the presumed split between research and practice that John Dewey spent a lifetime trying to repair. But the damage is still with us, and it becomes particularly apparent when the dominant view of educational change and school improvement -- R, D, D, and E -- is critically appraised.[13] This linear model of research, development, diffusion, and evaluation essentially pits experts against practitioners. Those "in the know" are the scholars that generate the research and the experts that package and disseminate the findings in useable form and evaluate the use of these packages in practice. Those "in need of knowing" are the practitioners,

the workers in schools, the consumers of new knowledge once it is appropriately distilled into in-service programs. School-based educators are seen as deficient in one or more skill areas and in need of retraining, rather than as professionals who reflect upon their work and upon ways in which they might do their work better. Schools are seen as places in disrepair and in need of fixing, rather than as messy social systems in the process of evolution. Changing schools, then, becomes a process of programmatic intervention and installation -- of applying the remedies of research to the ills of practice. The school, therefore, is an object to be changed, not a center of change -- developing knowledge and informing agendas of action happens somewhere else (in research universities, R&D centers, and district offices, for example); it does not happen as an ongoing part of professional life in schools.

To those researchers, developers, and change agents who are feeling unjustly berated by this barrage of criticism, I apologize. They might well complain that I have oversimplified the RDD&E process and that people do not really think and behave in these ways. I can only share with them some twenty years of working in and around universities, districts, and schools and my overwhelming impression that this "oversimplified" world view of research and practice is as alive and well today as it was in the latter half of the sixties. I have seen superintendents literally hand over lists of "independent" and "dependent" variables to their principals with exhortations to achieve the expected cause-effect relationship -- "Apply the principles of school effectiveness (principal leadership, high expectations, safe and orderly environment, etc.) and raise the standardized test scores in your school!" I have commiserated with teachers who spend 3 in-service days per academic year learning new techniques and 177 classroom days teaching in the same old

conditions and circumstances of schooling. I have argued with colleagues in research universities who insist that the "science" of educational inquiry can and must be separated from the "folklore" of educational practice. And in case any of us doubt the certainty of our science, we can always consult Goodwin Watson's What Psychology Can We Trust? or, if something more contemporary is preferred, the U.S. Department of Education's What Works.[14]

Major adjustments in epistemic perspectives are required to realize the potential for improvement and change in today's schools. These include not only more modest, realistic and philosophically sound interpretations of research in the empirical analytic tradition just described, but admitting into the fold of legitimate inquiry additional perspectives on knowledge and action -- perspectives that lead directly to schools as centers of change. Inquiry in the phenomenological tradition offers one of the neccessary adjustments. Phenomenology puts the knower back in touch with what might be known; through the various methods of, and approaches to, observation and case study -- ethnography, ethnomethodology, symbolic interactionism, analytic induction, grounded theory, etc. -- the researcher interprets the "text" of daily living, much as a historian might interpret the written texts of the past.[15] This hermeneutic approach to generating knowledge relies heavily upon the accumulation of interpretations of what people say and do in social settings (e.g. schools) and the meanings they attribute to their words and deeds.[16] In effect, phenomenologists attempt to get as close as possible to peoples' interpretations of their own worlds.

One method of "getting close" is through participant observation where the researcher plays a more active part, over a substantial period of time, in the events and activities of the people and social systems under study. Through

formal and informal data collection -- structured interviews and casual converstions; systematic and anecdotal observations; records, lists, materials, and other archival documents; daily journals/diaries and records of critical incidents; interpretive summaries, etc. -- the kind of "thick" descriptions and analytical interpretations can be constructed of schooling phenomena (e.g., leadership dynamics, learning climate, hidden or implicit curriculum, etc.) that are not possible using the correlational and experimental methods of the more positivist traditions.[17] Instead of explanations based upon statistical associations between operationally defined constructs, interpretations are drawn directly from actual circumstances, events, behaviors, and expressed sentiments as played out daily by people in the context of their work.[18] Although less rigorous and systematic, the ordinary ways in which people construct personal meaning and working knowledge in the context of organizational life resembles very closely the methods of phenomenological inquiry. Studies of the bases upon which teachers, for example, make instructional decisions consistently find that personal knowledge and experience are much more powerful influences on teachers' interpretations and understandings of their work than is knowledge generated by others outside the realm of these experiences.[19]

This is not suggest, however, that personal knowledge is necessarily better or worse than knowledge generated in other ways; rather, it is to suggest that the working knowledge of teachers is legitimate and something to be reckoned with. In effect, there are nearly two and a half million "participant observers" in charge of our public school classrooms and operating on a reservoir of both exceptional and conventional wisdom. The trick is to tap into the exceptional and break through the conventional. By providing teachers real opportunities to consider, critique, modify and adapt the best that research has

to offer in the context of their day-to-day work and their personal and collective teaching experiences, changing conventional practice becomes a possibility.

Consider, for example, the difficult issues of homogeneous versus heterogeneous grouping and managing individual differences in ability for instructional purposes in schools and classrooms. Suppose it is argued that the conventional wisdom of the relatively enduring stratifications and social sorting of kids into "groups" (at the elementary level) and "tracks" (at the secondary level) is misguided and promotes neither equity nor excellence in schooling. Suppose, further, that there are possible alternative practices that have enjoyed some empirical validation through research and development efforts -- cooperative learning and peer tutoring methods, for example. How, then, would epistemological predispositions condition the way we might think about and engage in the process of changing grouping practices in schools and classrooms?

Restricting inquiry and knowledge utilization in the RDD&E tradition would place educators in schools in the position of consumers. One or another brand of cooperative learning strategy would be advocated, packaged, and dispensed in the usual in-service manner. Teachers would presumably receive the new knowledge and transfer it to their classroom practices, perhaps with the help of consultants and or LEA resources to the extent provided. Schools may be targets of change but they are not centers of change; educators in schools are, in essence, passive recipients of fix-up routines designed to repair the machinery. Ideally, the more standardized and "teacher proof" the routine, the more likely educators in schools can replicate the intended outcomes.

Alternatively, admitting the phenomenological perspective into the domain of legitimate knowledge, schools can become centers of inquiry <u>activity</u>. Rather than

focusing on implementing solutions (e.g., a cooperative learning technique), the focus is turned toward the problem itself (e.g., instructional management of individual differences) and educators can become actively engaged in reflective behavior. What do I (and we) do now to handle student differences in their readiness to learn new skills? Why do we use the instructional practices that we do? What experiences have we had to suggest that these practices are and/or are not productive? What other instructional practices are possible? Assuming cooperative learning might be one of these, what strategies are currently being advocated? (At this point in the inquiry, an "in-service" and/or a field visit would be particularly useful.) To what extent are these strategies adaptable to our situation; what revisions, modifications, etc. can be made, if necessary, to make it worthwhile pilot testing some alternative practices? What are we learning from these new experiences -- ways to further refine and improve the cooperative learning practices or, perhaps, the need to rethink the whole grouping issue? In effect, I am outlining, here, an inquiry senario that puts educators into the center of a knowledge generating and using process. I am not suggesting that schools somehow become mini-R&D centers; rather, I am suggesting that any hope of significant and sustained educational change will need to recognize the personal nature of knowledge and the need for the significant involvement of educators in developing their own understandings.[20]

But this adjustment in epistemology is not enough. It is necessary, but insufficient, to recognize the intersubjectivity of the knower and the known as we build the argument for schools as centers of change. The most problematic nature of knowledge generated and packaged in the positivist and post-positivist traditions is not its reductionist and decontextualized character, but its pretense of value-free, objective science. In a popular text on research

methods, for example, we find that "scientific problems are not moral and ethical questions" and that the statement "Authoritarian methods of teaching lead to poor learning ... fails as a scientific hypothesis because it uses two value expressions or words, 'authoritarian methods of teaching' and 'poor learning,' neither of which can be defined for measurement purposes without deleting the words 'authoritarian' and 'poor.'"[21] Moreover, value statements implying "shoulds" or "oughts" are "metaphysical [statements] that cannot be tested ...[a]s such, science is not concerned with them. This does not mean that scientists would necessarily spurn such statements, say they are not true, or claim they are meaningless. It simply means that as scientists they are not concerned with them."[22]

As a scientist, I am concerned with them, metaphysically and methodologically. I find no comfort in being relieved from my responsibilities as a valuing human being, in a society of human beings, conducting inquiries with the hope of bettering the human condition (educational practice, for example). If, for example, I conducted some of the recent school effectiveness research, I would be ethically and morally bound to acknowledge my choice of outcome indicator -- my explicit or implicit decision to value a narrowly defined range of basic skills as operationalized in standardized test scores as a criterion against which "school effectiveness" would be judged. Likewise, in doing conventional studies of time on task or academically engaged learning time, I would need to warn educators who might place higher value on interpersonal communication skills, critical thinking, student decision-making, and so forth, that my findings were again limited to different student outcomes. In fact, were I to have conducted my studies using alternative criteria, I might have identified alternative teaching practices (e.g., role play and simulation;

student discussion; etc.) that would tend to conflict with those (e.g., teacher-led, direct instructional strategies) that correlated with typical measures of basic skills.[23]

Inqury is not value-free.[24] As Grene concludes in her analysis of the relationship between knower and known, "[t]here is ... no intelligible discourse independently of evaluation. Appraisal underlies all speech, and therefore all knowledge."[25] Moreover, as Grene goes on to argue, since "knowing is essentially a kind of doing, and human doing is always value-bound, then knowledge is so as well."[26] This represents another significant adjustment of the knowledge paradigms in both the positivist and phenomenological traditions. Inquiry is no longer something that is necessarily done first and then assembled for use, second. Knowledge generated in human action has purpose, and with purpose come values and human interests. There is little to be gained, therefore, in the expectation that knowledge will be utilized without the concomitant expectation that values and human interests need to be explicit in the knowledge-generating process.

I have already anticipated this idea of knowing in action in my discussion above of the phenomenological tradition and the stretching of this tradition to include educators as participant observers in their own program of school-based inquiry and change. I deliberately chose the homogeneous grouping and tracking issues precisely because of their ideological content and not too subtle implications for the educational interests of some at the expense of those for others.[27] Not many other specific educational issues can generate more debate (and anger) more quickly than discussions of the merits and demerits of the tracking and homogeneous grouping research and practices. My hope was that as readers followed my little scenario above of teachers developing their own

knowledge base around alternative practices (e.g., cooperative learning strategies) they would become increasingly uncomfortable due to unstated assumptions and biases; for what is missing from that scenario is the explicit consideration of meritocratic and democratic values and human interests in educational practice. Moreover, I used phrases that concealed some value-laden constructs that have traditionally structured the way many have interpreted and measured human potential. I referred, for example, to "managing individual differences in ability for instructional purposes," a phrase consistent with (1) ascribing the characteristic of fixed, intellectual potential to each student and then (2) assigning students to instructional groups or tracks based upon such measures as "intelligence quotients" or "scholastic apptitude." Later, I used the phrase "student differences in readiness to learn new skills," wherein the term "readiness" is intended to suggest not if students can learn but when (and under what conditions) students will learn.[28]

This paper, of course, is not about tracking, grouping, time on task, or school effectiveness. I have simply used those issues to illustrate the point that knowledge, whatever the particular method(s) for creating and using it, is always situated in a human context of beliefs, values, and interests. This is to suggest again the importance of contextualizing both extant and new knowledge where the action is in social settings -- schools, for example. It is necessary, therefore, to accomodate both the ideological content of inquiry and the active engagement of people in the process of inquiry. Digging into the normative nature of inquiry requires more than generating associations between measured constructs and more than generating interpretations of communicated human experience; it requires the systematic and rigorous critique of explanations and understandings -- a deliberately and critically reflective

stance with respect to all knowledge.

The critical-dialectical tradition of producing and using knowledge represents the second major challenge to the positivist and post-positivist traditions of research and development.[29] It represents, as well, a challenge to what might appear as relatively benign understandings that are inferred from the careful studies of ethnographers, participant observers, and the like. Through the process of rational discourse, critical-dialectical methods require of those to whom knowledge and action matters most that they tease out tacit beliefs, values and human interests -- both their own as well as those embedded in the production of knowledge in the first place. The idea of producing knowledge one place and then installing it for use in another place is an alien concept in this epistemological tradition. Regardless of where and how knowledge is generated, critical-dialectical methods demand that it be "re-known" in the context of values-based, human activity -- a concept of critical knowing in action or a "critical phenomenology," if you will. As Van Manen puts it, this is the process of "linking ways of knowing with ways of being practical."[30]

Once again, we are led to the importance of schools as centers of change. We are led to the idea of making the ordinary ways that working knowledge is already accumulated and used by educators in schools much more systematic and rigorous -- practice becomes the subject of deliberate reflection; values, beliefs and human interests are resurrected from individual and collective subconsciousnesses; and the best of extant knowledge can be reviewed critically for use in the context of these inquiry activities.

This requires building upon the reflective practice suggested earlier for educators as participant observers in their own schools. For a number of years, my colleagues and I have been attempting to combine competing epistemological perspectives into a working synthesis that capitalizes upon what we argue are

productive tensions between the several ways of knowing. The process -- which we have called critical inquiry -- is not directed at the impossible task of reconciling knowledge generated in positivist, phenomenological, and critical traditions. Rather, a program of critical inquiry in schools is oriented toward developing working consensus and agendas for action. Critical inquiry requires that participants, as individuals and groups, maintain a self-conscious stance with respect to all types of knowledge -- that they deliberately engage dialectically in the process of knowing through a series of generic questions designed to keep the discourse alive, informed, and values-based.[31]

First, the participants in a critical inquiry must continually remind themselves that the problems they face have a current and historical context, and that the problems -- using time effectively, staff communication, grouping students for instruction, and the like -- must be situated in these contexts in order to be understood. What are we doing now? and How did it come to be that way? are questions that help frame this discussion.

Second, to be critical, the inquiry must demand of participants that they confront the political reality of significant educational issues, and that they recognize and contend with embedded values and human interests.[32] Whose interests are (and are not) being served by the ways things are? is the question to be addressed here.

Third, a program of critical inquiry demands of participants that their inquiry be informed and that knowledge of all types be brought to bear upon issues under discussion. This includes the results of research studies (correlational, experimental, ethnographic, participant-observational, etc.) typically reported in books, journals, and occasional and technical reports from educational research projects; the educational innovations in curriculum and

instruction, organizational leadership and development, etc. typically disseminated by consultants and through workshops; results of studies done by LEA's; the experiential accounts of the participants themselves; and so forth. Moreover, information can be purposely generated in the context of the inquiry through the use of surveys, interviews, observations (teachers observing one another at work, for example), document reviews (e.g., curriculum plans, textbooks, evaluation instruments), etc. The question to keep in mind here is What information and knowledge do we have (or need to get) that bear upon the issues?

Finally, participants must continually remind themselves that all is not talk; that, notwithstanding the omnipresent ambiguity in educational organizations like schools, actions can and must be taken, reviewed, revised, retaken, reviewed ... . The questions to ask at every opportunity are Is this the way we want things to be? and What are we going to do about all this? A program of critical inquiry never really ends; it is, indeed, the process of school renewal and change.[33]

Understand that I am not suggesting that only educators in schools can participate in the inquiry -- district staff, university-based educators, educational consultants, parents, students, and so forth are all viable participants in the discourse. I am suggesting, however, that only the schools are the centers of change -- not legislative offices, districts or service centers, R and D centers, colleges of education, or professional development centers. These are all valuable resources. But given the epistemological considerations discussed thus far, knowledge and practice come together only through human discourse and action in the organizational context, not simply through better training programs for individuals, teacher-proof curricula,

meta-interpretations of the various and sundry educational research studies, and so forth. The center for the discourse suggested by the above questions, therefore, can be located nowhere else but in schools.

The Organizational Strand

Since I believe that I have already presented the most compelling strand of the argument for schools as centers of change, I will not dwell too long on these next two supporting strands. Clearly, there is an extensive and distinguished literature on organizational theory and practice concerning the structure and function of organizations and the implications thereof for the behavior of people in organizations.[34] Much of this literature has been translated directly for educational organizations, public schools in particular, often in the context of educational administration.[35] Interestingly, the development of "world views" regarding what constitute appropriate theoretical frames through which to view organizational practice parallels in most respects the several paradigmatic traditions of legitimate knowledge reviewed above.

The industrial revolution and the turn of century heralded the attempts to establish order, rationality and a scientific base for organizational structure, decision-making, and work. Between the scientific management principles offered by writers such as Taylor and the hierarchical, bureaucratic structure envisioned by Weber, the foundation was set for a rational, linear, machine-like view of organizational development that persists to this very day.[36] This view tends to be characterized by top-down decision-making and accountability structures, the search for and use of technological solutions to human problems, and the monitoring of work through the use of quality control indicators.

It did not take long for this view to be swallowed hook, line and sinker by

educators (in universities, districts and schools) and educational reformers (wherever located). The school-as-a-factory metaphor, for example, was launched early on by Ellwood Cubberley in one of the first of a long line of books on educational administration:

> Our schools are, in a sense, factories in which the raw products (children) are to be shaped and fashioned into products ... The specifications for manufacturing come from the demands of twentieth-century civilization, and it is the business of the school to build its pupils according to the specifications laid down. This demands good tools, specialized machinery, continuous measurement of production to see if it is according to specifications, the elimination of waste in manufacture, and a large variety in the output.[37]

Although the metaphor is more subtle at times, one can still find it shaping the way people think about schooling today:

> Education Is California's Growth Industry ... The conditions are right for California's public education system ... to become, in the vernacular of the private sector, the hot new industry of the 1980's and 1990's. The resources are there ... These children are California's greatest natural resource. [Schools are] the key supplier[s] to every public and private sector ... [Their] product -- educated people -- will shape our entire society.[38]

One can clearly see parochial interpretations of the positivist tradition at work in these metaphors and resultant organizational practices. Local educational agencies have been particularly eager to adopt "new" management schemes that were invented (and that are on their way to being discarded) in the

private sector -- SOPs (standard operating procedures), MBO (management by objectives), PERT (program evaluation review technique), etc. Much of the macro-level educational research that has been conducted follows this same production line, input-process-output model -- the raw materials of schooling (input characteristics of the community, students, teachers, etc.), the machinery of schooling (organizational processes and instructional practices), and the quality control indexes of schooling (achievement test score outcomes).[39] Changing and improving organizations, then, is the equivalent of good management and the application of research-based technology. When the machinery of a school is out of whack, change (or retrain) the personnel using the best available know-how. In effect, manipulate the manipulable inputs and processes to effect the desired oucomes.

Partly as a reaction to the robotistic flavor of scientific management, the human relations view of organizations and organizational life gained momentum with the early work of people like Chester Barnard and Elton Mayo, followed by the more contemporary versions by theorists such as Argyris and McGregor.[40] The argument was that people have needs as individuals and as members of groups; an organization, no matter how well managed, will not be effective unless the personal and interpersonal domains of human behavior are cared for. The predominate view of organizations, however, remained mostly unchanged; organizations were still regarded as relatively closed, social systems with management, worker and production functions -- if you could just get people feeling good about themselves and their workplace, then, as satisfied employees, they would produce better products.

Critics of the human relations movement have noted -- rightly, I believe -- that organizational conflict is not something that can be eliminated through

sensitivity training and the other organizational development devices that flourished during the application phases of human relations theory. "Differences in economic structure and power positions cannot be communicated away," as Etzioni has noted.[41] The idea of "communication" in organizational development terms, of course, bears little resemblance to the idea of "communicative competence" in the critical-dialectical traditions discussed above.[42] In the former, people are "trained" to relate to one another, to become conscious of their own hang-ups, and to find ways of diminishing, if not eliminating, conflict within the existing parameters of the organization. In the latter, people continually struggle not only with interpersonal relations but with the very structures and conditions within which they work -- conflicts in values and human interests are the very substance of the discourse. From the human relations perspective, then, schools would be more like centers of therapy than change.

Both the narrow scientific management and human relations views of organizations (schools included) have given way to alternative conceptions of organizations and organizational life. School districts and schools, for example, are not closed systems; they interact continuously with their socio-political environments at local, state, and national levels. Complex organizations, like districts and schools, are often combinations of formal and informal structures and functions, personal and interpersonal dynamics, and political conflicts between special interest groups. These organizations, to a noticeable extent, develop a mini-culture of their own, consisting of many of the usual features that define cultures -- norms, roles, expectations, symbols, rituals and ceremonies, explanations about why things are the way they are (e.g., myths), conventional behaviors that maintain conventional wisdom, and so on.[43]

One of these "cultural regularities,"[44] is organizational ambiguity.[45] The idea that all goals are specified in advance and acted upon systematically as planned is just another one of the organizational myths. March has argued persuasively that although organizations are not without overarching purposes, specific goals and objectives, rather than directing action, usually become obvious through action.[46] He suggests that the conventional and linear ways that people think they are supposed to use to make sense out of organizational life must be turned upside-down -- that is, treating "goals as hypotheses ... intuition as real ... hypocrisy as transition ... memory as an enemy ... [and] experience as a theory" is much more in line with the ways people ordinarily develop working knowledge.[47]

This shifting of world view regarding organizations and behavior within organizations mirrors the shift to the phenomenological concepts and methods discussed previously. It puts the organization and the people within the organization back into the picture with respect to how the place functions and changes. Weick captures this epistemological shift well in the context of organizational life:

> People commonly assert, "I'll believe it when I see it." This bit of wisdom probably should be turned on its ear so that it approximates more closely the ways in which people actually act: "I'll see it when I believe it."[48]

These statements, of course, suggest an even greater shift in organizational theory and change than Weick probably had in mind. For at the heart of beliefs (and their dispositions toward action, i.e., attitudes) are values -- fundamental standards for moral judgments, personal and social conduct, and human existence.[49] Thus, in any discussion of values in a

sociopolitical context, human interests and ideologies are implicit (if not explicit). Attitudes toward using cooperative learning techniques in classrooms, for example, are conditioned by beliefs regarding the appropriateness of tracking and homogeneous versus heterogeneous classes which, in turn, are rooted in values concerning the nature of freedom, justice, and serving the educational interests of some at the expense of others.

Paralleling the shift to critical-dialectical perspectives in knowledge production and utilization, there has been a growing movement in organizational theory (and particularly in the theory of school administration) that has challenged the prevailing wisdom of the scientific management, human relations and open systems/cultural perspectives.[50] Although admitting that organizations can be characterized in part by features from each of these perspectives, the critical view of organizations challenges the very conditions and power relationships that define organizational structure and function.

For example, the view of organizations as cultures has given rise to a kind of "management by symbols" concept of organizational change. Ouchi's Theory Z suggests that companies develop a culture around a central organizational philosophy while at the same time promoting non-token participative management at all levels of leadership within the organization.[51] Schools and schooling, of course, may be a bit more complicated. Meyer and Rowan suggest a rather elaborate culture of schooling that is held together through the tight coupling of symbols and ceremonies at the levels of administrator accountability and the loose coupling of administration, teachers and teaching behind classroom doors.[52] These conceptions of organizations, although clearly placing them in the center of the action for change, offer little in the way of change strategy other than trying to manipulate symbols, roles, norms, expectations and the other

features that make up the complex of organizational culture.

A critical perspective of organizations on the other hand, like its epistemological counterpart, is the catalyst for action. It is concerned primarily with trying to change the organization in the process of trying to understand it -- the concept of praxis. In his seminal paper on the dialectical view of organizations, Benson summed up the argument thusly:

> A dialectical analysis of organizations ... should be concerned with conditions under which people may reconstruct organizations and establish social formations in which continuous reconstruction is possible. This provides guidance regarding the selection of research questions. Some important issues are the humanization of work processes, the development of systems of participation (self-management), the discovery of alternatives to bureaucracy, the removal of systems of dominance, the provision for the utilization of expert knowledge without creating technocratic elites, removing the resistance of organizations to more rational arrangements ... These are, of course, difficult problems and the task is complicated by the possibility that contradictions will develop between them, for example, creating rational systems may undermine self-management. Thus, the prospect is for a continuous process of reconstruction.[53]

Once again, therefore, we are lead to the organization, e.g., the school, as the center of change. We are not lead naively to see the school as isolated from its sociopolitical context, able to engage in miraculous self-renewing activities without district, community, state, and federal support. But we are lead to where the day-to-day action is, to where, with the proper motivation and support, the prevailing conditions and circumstances schools can be challenged

constructively within the context of competing values and human interests.

The Experiential Strand

Up to this point, my argument has been largely conceptual in nature although I have alluded to studies based upon observations of how people ordinarily go about making sense of their work. But let us, for the record, consider what the history of attempts to make fundamental changes in schools has to add to the argument.

Perhaps the most comprehensive foray into the successes and failures of major educational innovations and change strategies was the series of change agent studies conducted by the Rand Corporation. Nearly 400 local and national federally funded projects were reviewed from the standpoints of initiation, implementation, and continuity. Berman and McLaughlin finally concluded that the results

> "reveal inconsistent and generally disappointing results. Despite considerable innovative activity on the part of local school districts, the evidence suggests that: No class of existing educational treatments has been found that consistently leads to improved student outcomes ... 'Successful' projects have difficulty sustaining their success over a number of years ... [they] are not disseminated automatically or easily, and their 'replication' in new sites usually falls short of their performance in the original sites."[54]

Strategies found by the researchers that were particularly ineffective included the use of "outside consultants ... packaged management approaches ... one-shot, preimplementation training ... pay for training ... formal evaluation ... [and] comprehensive [overly ambitious] projects."[55] A constellation of strategies

found to be more promising included "concrete, teacher-specific, and extended training; classroom assistance from project or district staff; teacher observation of similar projects in other classrooms, schools, or districts; regular project meetings that focused on practical problems; teacher participation in project decisions; local materials development; [and] principal participation in training."[56] The phrase "mutual adaptation" was coined by the researchers to indicate the two-way-street nature of the more successful innovations -- that is, the willingness of educators in schools and districts to bend in accord with project requirements and the flexibility of project staff to modify project requirements in accord with the exigencies of schooling.

In short, as the arguments in the preceding two sections have suggested, people who live and work in complex organizations like schools need to be thoroughly involved in their own improvement efforts, assuming significant and enduring organizational change is the purpose we have in mind. Not surprisingly, this same conclusion is reinforced by the experiences of the many educators in universities and schools who have engaged in what has been variously labeled as action, interactive or collaborative research. The Golden Rule of collaborative research is "Do <u>with</u> others as you would have them do <u>with</u> you." After reviewing a number of such efforts between university- and school-based educators, Tikunoff and Ward have delineated clearly both the principles and characteristics of collaborative research.[57] The principles are:

> (1) researchers and practitioners work together at all phases of the inquiry process; (2) the research effort focuses on "real world" as well as theoretical problems; (3) mutual growth and respect occur among all participants; and (4) attention is given to both research and implementation issues from the beginning of the inquiry process.

The outcomes that tend to characterize collaborative research efforts are:

> (1) ... collaboration promotes investigating and understanding the complexity of the instructional process and the context in which instruction occurs; (2) ... [results] appear to be more robust and externally valid; (3) teachers perceive the findings ... to be more immediately useful ...; (4) teachers ... utilize the data collection procedures and processes for investigating their own instructional problems; and (5) all participants obtain new insights and understandings about their own and other participants' roles in education.

These principles and characteristics, of course, overlap considerably with the critical inquiry paradigm that I outlined in the first section. It is good news, indeed, that implications from a philosophy of knowing-in-action correspond with the experiences of the more successful efforts in changing and improving practices in schools. But these efforts are not without problems; by their very nature they conflict with many of the cultural regularities of schooling and the ordinary ways in which educators have tried to bring about change. For these reasons, my colleagues and I recognized through our own trials and tribulations that the collaborative paradigm itemized above had to be shifted in accord with a more critical perspective on organizations and organizational change.[58] In effect, a fifth item must be added to the list of principles: Attention is given through critical discourse to the beliefs, values and human interests that invariably interact with the process of generating and using knowledge.

Conclusion

Any of these several strands -- preferably, the combined strength of all three -- support the conclusion that schools are not only the targets of educational improvement, they are, indeed, the centers for educational change. And as centers for educational change, I have argued, they must be centers of inquiry. By this I am not suggesting that schools compete with colleges, universities, and research centers. I am suggesting that educators in schools, using all the collaborative help they can get, become their own change agents and active and critical consumers of their own and others' knowledge in the context of their own practices and the changing of these practices.

Two decades ago, Robert Schaefer delivered the ninth John Dewey lecture entitled "The School as a Center of Inquiry."[59] I have only two misgivings regarding this work which I consider, on the whole, to be among the finest statements of the thesis that I have tried, in my own way, to argue for here. My first misgiving is his choice of title -- I wish he had used another so that I could have considered it for my own. The school as a center of inquiry really embodies the whole idea of both the target, locus and process of educational change and school improvement.

On a more serious note, my second concern relates to Schaefer's vision of what inquiring schools might look like -- how they might be structured, staffed, and operationalized. We are in clear agreement that the present conditions and circumstances of schools could not be more antithetical to centers of inquiry and change than if they were so planned from the outset. The isolation of educators (both teachers and administrators) from one another, the lock step chopping up of the instructional day into isomorphic relationship with subject matters, the indiscriminate allocation of untenable student-teacher ratios, the

almost nonexistent time for genuine reflective practice, and the lack of commensurate rewards given the nature of the job are among the worst of these conditions and circumstances. This dismal picture is perhaps no more vividly portrayed than by Sizer's description of Horace -- his dreams of becoming a teacher and his compromises having become one.[60]

As clear as it is that schools are the centers of change, therefore, it is clear that they must be significantly altered if they are to function as centers of inquiry. Releasing teachers and administrators for significant periods of time from instructional and routine duties in order to engage in the kind of critical inquiry suggested above is the primary focus of this reconstruction. Reorganizing and integrating the curriculum, more efficient use of human resources, time, and technology, eleven-month appointments of educators, and so forth, are among the more obvious ideas which with to experiment.[61]

Yet what would be the nature of the inquiry and who would be doing it? Here is where Schaefer and I part company. I am not convinced that it is either necessary or sufficient that schools, as centers of inquiry and change, must be connected to universities and be inhabited by an elite corps of trained "researcher-" or "scholar-teachers" in order for the school to become the renewing organization that we envision.[62] All my experience working with educators in schools suggests that there already exists an enormous reservoir of talent just waiting for the dam to burst.[63] Being playful with ideas, being inventive and creative, being reflective with respect to one's practice,[64] does not require an advanced degree or an invasion of consultants with titles after their names. I have personally encountered as many (perhaps more) non-reflective theoreticians in colleges and universities as I have non-reflective practitioners in districts and schools. Critical inquiry is not only a process, but an

attitude, based upon strongly held beliefs and values beyond those ordinarily fostered in research universities, that requires leadership and nurturance in a hospitable, organizational environment. And the leadership can come from any of one or more sources: parents, teachers, principals(s), district staff, university staff, etc. -- so long as the principles of collaborative and critical inquiry are taken seriously. I am not suggesting, therefore, that collaborations or partnerships between schools and universities are of little or no use. Indeed, they have enormous catalytic potential for the kind of school transformations (and, I should add, concomitant reconstruction of colleges of education as well) that are clearly necessary.[65] (Surely, teacher education programs will need to participate in these transformations and prepare and socialize new educators accordingly.)

The conference for which this paper was prepared was based on the pleasantly optimistic hope for a new wave of more thoughtful and constructive school reform. The "first" wave of the early 80's that drenched the public schools would appear to be receding from our educational shorelines save for a backwash directed at institutions of higher education and particularly at liberal arts and teacher education programs. Of course, there have been many "first" waves. Each time, they break in a crash of symbols and ceremonies leaving residual effects in schools and classrooms that are scarcely more than ripples. Pomp and circumstance gets played out at federal and state levels -- calls for back-to-the-basics, tougher accountability standards, minor salary increases for teachers, and the like -- as though the conditions, practices, and people in schools were only flotsam and jetsam in the swell.

I am not too sanguine about waves -- they usually end up taking away more then they bring. What school reform needs is a long-term commitment to the hard

business of inquiry and educational reconstruction where the agenda for reform resides -- in schools. The school is the obvious place where educators can come together to deal with tough issues and good ideas in the context of practice. The school is the place where critical inquiry is not just an arm-chair dialectic, but a paradigm of knowing and reknowing in the context of action. Schools are not only places for teaching critical thinking, they are places for thinking critically about teaching.

As we attempt, therefore, to sustain whatever is left that is positive in this decade of educational reform, let us not forget where the ultimate power to change is and always has been -- in the heads, hands, and hearts of the educators who work in our schools. And let us go where the action is!

FOOTNOTES

1. W. Vance Grant and Thomas D. Snyder, Digest of Education Statistics, 1985-86 (Washington, D.C.: Office of Educational Research and Improvement, U. S. Department of Education, 1987). See Table 47, p. 52.

2. Ibid., p. 52, Table 39. Estimate assumes 4 instructional hours per day, 180 instructional days per year, and 17.1 pupils per teacher using average daily attendence figures.

3. Larry Cuban, How Teachers Taught: Constancy and Change in American Classrooms, 1890-1980 (New York: Longman, 1984); John I. Goodlad and M. Francis Klein and Associates, Behind the Classroom Door (Worthington, OH: Jones, 1970); Philip W. Jackson, Life in Classrooms (New York: Holt, Rinehart & Winston, 1968); Kenneth A. Sirotnik, "What You See Is What You Get: Consistency, Persistency, and Mediocrity in Classrooms," Harvard Educational Review 53 (1983): 16-31.

4. Frederick W. Taylor, The Principles of Scientific Management (New York: Harper & Row, 1911).

5. See, for example: Mary M. Bentzen and Associates, Changing Schools: The Magic Feather Principle (New York: McGraw-Hill, 1974); John I. Goodlad, "The Individual School and its Principal: Key Setting and Key Person in Educational Leadership," Educational Leadership 13 (1955): 2-6; John I. Goodlad, The Dynamics of Educational Change (New York: McGraw-Hill, 1975); Bruce R. Joyce, Richard H. Hersh and Michael McKibbin, The Structure of School Improvement (New York: Longman, 1983); and Robert J. Schaefer, The School as a Center of Inquiry (New York: Harper & Row, 1967). Another intimately related line of supporting research and practice, one I will not attempt to review here, can be found in the work on social ecologies; for example, see Roger G. Barker, Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior (Stanford, CA: Stanford University Press, 1968) and Paul V. Gump, "The Behavior Setting: A Promising Unit for Environmental Designers," Landscape Architecture 61 (1971): 130-134.

6. Goodlad, The Dynamics of Educational Change; John I. Goodlad, ed., The Ecology of School Renewal, 1987 Yearbook, Part I, National Society for the Study of Education (Chicago: University of Chicago Press, 1987); Seymour Sarason, The Culture of the School and the Problem of Change (Boston: Allyn and Bacon, 1971 and 1982).

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8. D. C. Phillips, "After the Wake: Postpositivistic Educational Thought," Educational Researcher 12, No. 5 (1983):4-12. See, also, the response in the same issue by Elliot W. Eisner, "Anastasia Might Still be Alive, But the Monarchy is Dead," pp. 13-24.

9. Lee J. Cronbach, "Beyond the Two Disciplines of Scientific Psychology," American Psychologist, 30 (1975): 116-127.

10. Ibid., p. 126.

11. Abraham Kaplan, The Conduct of Inquiry: Methodology for Behavioral Science (San Francisco: Chandler Publishing, 1964), p. 406.

12. Jonas F. Soltis, "On the Nature of Educational Research," Educational Researcher, 13, No. 10 (1984): 5-10, p. 6.

13. See the Rand change agent studies by Paul Berman and Milbrey Wallin McLaughlin, Federal Programs Supporting Educational Change, Vol. VIII (Santa Monica, CA: The Rand Corporation, 1978). For other commentaries on, critiques of, and alternatives to the RDD&E model, see, for example, Eleanor Farrar, John

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14. Goodwin Watson, What Psychology Can We Trust? (New York: Bureau of Publications, Teachers College, 1961); What Works: Research About Teaching and Learning (Washington, D.C.: United States Department of Education, 1986).

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16. See, for example, Roger Jehenson, "A Phenomenological Approach to the Study of the Formal Organization" in Phenomenological Sociology: Issues and Applications, ed. George Psathas (New York: John Wiley & Sons, 1973); Paul Ricoeur, "The Model of the Text," Social Research 38 (1971): 529-555; and Charles Taylor, "Interpretation and the Sciences of Man," Review of Metaphysics 25 (1971): 3-34.

17. See Clifford Geertz, The Interpretation of Culture (New York: Basic Books, 1973).

18. See the discussion by David P. Ericson and Frederick S. Ellett, "Interpretation, Understanding, and Educational Research," Teachers College Record 83 (1982): 479-513.

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20. The example I have chosen comes from first-hand experience with an effort to integrate cooperative learning into an elementary school curriculum using a sequence of inquiry not unlike that described here. See Sydney H. Farivar, Developing and implementing a cooperative learning program in a middle elementary classroom. Unpublished doctoral dissertation (Los Angeles: University of California, 1985).

21. Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart & Winston, 1986), pp. 20-21.

22. Ibid., p.5.

23. For a review of the school effectiveness research, see Stewart C. Purkey and Marshall S. Smith, "Effective Schools: A Review," The Elementary School Journal 4 (1983): 427-452. The research on time on task has been reviewed by Barak Victor Rosenshine, "Academic Engaged Time, Content Covered,

and Direct Instruction," Journal of Education 160 (1978): 38-66.

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25. Marjorie Grene, The Knower and the Known (New York: Basic Books, 1966), p. 172.

26. Ibid., p.179.

27. Jeannie Oakes, Keeping Track: How Schools Structure Inequality (New Haven: Yale University Press, 1985).

28. Discussions of the ideological content and just plain sloppiness in the historical use of constructs like intelligence, ability and potential can be found in Howard Gardner, Frames of Mind: The Theory of Multiple Intelligences (New York: Basic Books, 1983); Stephen Jay Gould, The Mismeasure of Man (New York: W.W. Norton, 1981); and Israel Scheffler, Of Human Potential: An Essay in the Philosophy of Education (Boston: Routledge & Kegan Paul, 1985).

29. I have been influenced most in this area by two writers: Jurgen Habermas, particularly his books Knowledge and Human Interests (Boston: Beacon Press, 1971) and Communication and the Evolution of Society (Boston: Beacon Press, 1979), and Paulo Freire, particularly his books Education for Critical Consciousness (New York: Continuum, 1973) and Pedagogy of the Oppressed (New York: Continuum, 1970).

30. Max Van Manen, "Linking Ways of Knowing With Ways of Being Practical," Curriculum Inquiry 6 (1977): 205-228.

31. Paul E. Heckman, Jeannie Oakes and Kenneth A. Sirotnik, "Expanding the concepts of renewal and change," Educational Leadership 40 (1983), 26-32; Sirotnik and Oakes, Critical Inquiry for School Renewal; and Kenneth A. Sirotnik, "Evaluation in the Ecology of Schooling: The Process of School Renewal," in The Ecology of School Renewal, Goodlad.

32. I hope readers understand that the term "critical" is being used here in the epistemological sense intended -- dialectical and constructive, not polemical and destructive.

33. Sirotnik, "Evaluation in the Ecology of Schooling."

34. Good overviews can be found in Lee G. Bolman and Terrence E. Deal, Modern Approaches to Understanding and Managing Organizations (San Francisco: 1984) and W. Richard Scott, Organizations: Rational, Natural and Open Systems (Englewood Cliffs, NJ: Prentice-Hall, 1981).

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perspectives in the collection by Thomas J. Sergiovanni and John E. Corbally, eds., Leadership and Organizational Culture: New Perspectives on Administrative Theory and Practice (Urbana and Chicago: University of Illinois Press, 1984).

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37. Ellwood P. Cubberley, Public School Administration (Boston: Houghton Mifflin, 1916), p. 338.

38. Who Will Teach Our Children: A Strategy for Improving California's Schools (Sacramento, CA: California Commission on the Teaching Profession, 1985).

39. See the review by Naftaly S. Glasman and I. Biniaminov, "Input-Output Analyses of Schools," Review of Educational Research 51 (1982): 509-539. The most notable example, of course, is the report by James S. Coleman, et al., Equality of Educational Opportunity (Washington, D.C.: U.S. Government Printing Office, 1966).

40. Chester I. Barnard, The Functions of the Executive (Cambridge, MA: Harvard University Press, 1938); Elton Mayo, The Social Problems of an Industrial Civilization (Boston: Graduate School of Business Administration, Harvard University, 1945); Chris Argyris, Personality and the Organization (New York: Harper & Row, 1957); Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill, 1960).

41. Amitai Etzioni, Modern Organizations (Englewood Cliffs, NJ: Prentice-Hall, 1964), p. 44.

42. Contrast group communication strategies presented in Schmuck, et al. The 2nd Handbook of Organization Development, for example, with those advocated by Habermas, Communication and the Evolution of Society and Freire, Education for Critical Consciousness.

43. Terrence E. Deal and Allan Kennedy, Corporate Cultures (Reading, MA: Addison-Wesley, 1982). Examples of work pertaining specifically to schools are Christopher J. Hurn, The Limits and Possibilities of Schooling (Boston: Allyn & Bacon, 1978); Lortie, Schoolteacher; Sarason, The Culture of the School; and Waller, The Sociology of Teaching.

44. Sarason, The Culture of the School, see Chapter 6.

45. James G. March and Johan P. Olsen, Ambiguity and Choice in Organizations (Oslo: Universitetsforlaget, 1976).

46. James G. March, "Model Bias in Social Action," Review of Educational Research 42 (1972): 413-429.

47. Ibid., pp. 426-427.

48. Karl E. Weick, The Social Psychology of Organizing (New York: Random House, 1979), pp. 134-135.

49. Milton Rokeach, Beliefs, Attitudes, and Values (San Francisco: Jossey-Bass, 1970).

50. Examples are: Richard J. Bates, "Toward a Critical Practice of Educational Administration," in Leadership and Organizational Culture, ed. Sergiovanni and Corbally; J. Kenneth Benson, "Organizations: A Dialectical View," Administrative Science Quarterly 22 (1977): 1-21; William Foster, Paradigms and Promises: New Approaches to Educational Administration (New York: Prometheus Books, 1987); Thomas B. Greenfield, "Organization Theory as Ideology," Curriculum Inquiry 9 (1979): 97-112.

51. William Ouchi, Theory Z (Reading, MA: Addison-Wesley, 1981). See, also, the accounts of Thomas J. Peters and Robert H. Waterman, Jr., In Search of Excellence (New York: Harper & Row, 1982).

52. John W. Meyer and Brian Rowan, "The Structure of Educational Organizations," in Studies on Environments and Organizations, ed. M.W. Meyer, et al. (San Francisco: Jossey-Bass, 1978).

53. Benson, "Organizations: A Dialectical View," pp. 18-19.

54. Berman and McLaughlin, Federal Programs Supporting Change, Vol. VIII, pp. 1-2.

55. Ibid., pp. 27-28.

56. Ibid., p. 34.

57. William J. Tikunoff and Beatrice A. Ward, "Collaborative Research on Teaching," The Elementary School Journal 83 (1983): 453-468, pp. 466-467.

58. Jeannie Oakes, Sharon Hare and Kenneth A. Sirotnik, "Collaborative Inquiry: A Congenial Paradigm in a Cantankerous World," Teachers College Record 87 (1986): 545-561.

59. Schaefer, The School as a Center of Inquiry.

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61. See, for example, the ideas suggested by John I. Goodlad, A Place Called School: Prospects for the Future (New York: McGraw-Hill, 1984).

62. Schaefer, The School as a Center of Inquiry, see pp. 75-77.

63. "... our data indicate that teachers rise to challenges," concluded Berman and McLaughlin, Federal Programs, Vol. VIII, p. 25. Anyone who doubts this might wish to read the recent article by Lynn Olson, "Study Groups Giving Committed Teachers the Chance to Reflect, Share, and Learn," Education Week (June 3, 1987).

64. In Schon's The Reflective Practitioner, we have as good a summary as any of what reflective practice can be: "When someone reflects-in-action, he becomes a researcher in the practice context. He is not dependent on the categories of established theory and technique, but constructs a new theory of the unique case ... he does not keep means and ends separate, but defines them

interactively as he frames a problematic situation ... He does not separate thinking from doing ... Because his experimenting is a kind of action, implementation is built into his inquiry." (p. 68) The program of critical inquiry suggested here adds the critical-dialectical component to reflection-in-action and demands that it be not only an individual but a group process as well.

65. Kenneth A. Sirotnik and John I. Goodlad, eds., School-University Partnerships in Action: Concepts, Cases, and Concerns (New York: Teachers College Press, in press).

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